

BellSouth Telecommunications, Inc.

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November 12, 1997

Guy M. Hicks General Counsel

VIA HAND DELIVERY

David Waddell, Executive Secretary Tennessee Regulatory Authority 460 James Robertson Parkway Nashville, TN 37238

Re:

Universal Service Generic Contested Case

Docket No. 97-00888

Dear Mr. Waddell:

Enclosed for filing in the above-referenced matter are the original and thirteen copies of the following direct testimony:

- 1. Peter F. Martin
- 2. Richard Emerson
- 3. Daonne Caldwell.

Copies have been provided to counsel of record.

Very truly yours,

Shup Hell C

Guy M. Hicks

GMH/ch

Enclosure

cc:

Charles Howorth

Bennett Ross

1		BELLSOUTH TELECOMMUNICATIONS, INC.	
2		DIRECT TESTIMONY OF PETER F. MARTIN	•
3		BEFORE THE TENNESSEE REGULATORY AUTHORITY	
4		DOCKET NO. 97-00888	
5		<b>NOVEMBER 12, 1997</b>	
6			
7	Q.	PLEASE STATE YOUR NAME, ADDRESS AND POSITION WITH	
8		BELLSOUTH TELECOMMUNICATIONS, INC.	
9			
10	A.	My name is Peter F. Martin and I am employed by BellSouth Telecommunicat	ions,
11		Inc. ("BST") as a Director in Regulatory. My business address is 675 West Po	eachtree
12		Street, Atlanta, Georgia 30375.	
13			
14	Q.	PLEASE GIVE A BRIEF DESCRIPTION OF YOUR BACKGROUND AND	
15		EXPERIENCE.	
16			
17	A.	I graduated from the Georgia Institute of Technology with a Bachelor of Indus	strial
18		Engineering Degree in 1981. I was awarded a Master of Business Administra	tion
19		Degree in 1988 from Georgia State University.	
20			
21		I began employment with Southern Bell in 1981 as an Outside Plant Engineer	in
22		Southeast Florida. I have held positions in the Revenue Requirements/Pricing	and

1		Pricing and Economics organizations. From June of 1990 to September 1996, I served
2		in BST as a Manager in Regulatory Policy and Planning. I have been in my present
3		position since September 1996.
4		
5	Q.	HAVE YOU TESTIFIED PREVIOUSLY ON UNIVERSAL SERVICE?
6		
7	A.	Yes, I testified on Universal Service in Tennessee in Docket No. 95-02499. I have
8		also testified in South Carolina, Georgia, Florida, Louisiana, and Kentucky. In
9		addition, I was a panelist before the Federal-State Joint Board on Universal Service
10		during a workshop that was held in January 1997 on cost proxy models.
11		
12	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
13		
14	A.	I am here today to address universal service issues which have been designated for
15		Phase I review by the Tennessee Regulatory Authority ("TRA"). Certain issues
16		related to cost models (Issues 9a, e, f, g, h, and i) are addressed by Ms. Daonne
17		Caldwell, while Dr. Richard Emmerson discusses economic principles related to
18		certain universal service issues. In addition, I also comment upon those issues
19		which were addressed by the proposed stipulation of most of the Parties to this
20		docket.
21		

22 Q. HOW HAVE YOU STRUCTURED YOUR TESTIMONY?

1		
2	A.	For ease of reference, I have followed the Universal Service final issue list which
3		was developed by the TRA with industry participation. After a general
4		introduction, the first part of my testimony generally covers the "contested"
5		issues, while the issues that had agreement of most of the Parties are discussed in
6		the second part of my testimony.
7		
8		INTRODUCTION
9		
10	Q.	WHAT IS UNIVERSAL SERVICE?
11		
12	A.	Universal service basically refers to the policy of widespread availability of
13		affordable high quality local exchange telephone service. Universal service has
14		been a long-time policy of this Nation and this State, and it has served everyone
15		well. It does not matter whether you live in Nashville or in a remote part of
16		Tennesseeconsumers have access to basic local exchange telephone service at
17		affordable rates.
18		
19	Q.	HOW HAS UNIVERSAL SERVICE BEEN SUPPORTED IN THE PAST?
20		
21	A.	Incumbent Local Exchange Carriers ("ILECs") have traditionally supported

universal service, largely through implicit mechanisms. Implicit support is

1		provided internally within an ILEC's rate structure, allowing basic local rates to
2		remain at current levels by providing support from business services, intraLATA
3		toll, switched access and other services.
4		
5	Q.	DID THE TELECOMMUNICATIONS ACT OF 1996 ADDRESS IMPLICIT
6		SUPPORT?
7		
8	A.	Yes, it did. The Act says that universal service support should be explicit. Also,
9		one of the principles of the Act says that there should be both state and federal
10		support mechanisms.
l 1		
12	Q.	ARE THERE ANY SOUND PUBLIC POLICY REASONS THAT IMPLICIT
13		SUPPORT SHOULD BE MADE EXPLICIT?
14		
15	A.	Yes. Companies should be able to decide where they want to provide service
16		based on marketplace considerations. Hidden implicit subsidies distort the
17		decision process. An explicit universal service fund would benefit incumbent
18		LECs, competitive LECs, and, most of all, consumers. It benefits incumbent
19		LECs because they will not be able to rely on implicit support in the future.
20		Support will be competed away if it is left hidden in rates. Competitors will target
21		the customers and services that currently provide the most implicit support, such

as business customers. This process has already begun. It will only intensify as new entrants target business customers, especially in the urban areas.

However, making implicit support explicit also benefits competitive LECs.

CLECs will have no reason to enter rural high cost areas if they can't cover their costs. Indeed, Joel Klein, Assistant Attorney General for the Department of Justice, gave a speech on November 5th in which he said, "We must be candid in acknowledging that our present system of implicit universal service subsidies is a real impediment to full scale residential competition." Mr. Klein even gives a real world example of why a CLEC in South Carolina would never try to serve a residential customer that only has basic dial tone. The CLEC could not cover its costs. However, a properly sized universal service fund would give CLECs an incentive to serve all areas, including rural high cost areas. This is equally true in

Tennessee.

Lastly, a sufficient and explicit USF is needed to benefit and protect consumers in the rural parts of Tennessee. Referring again to Mr. Klein's speech, he said that, "residential customers still will not get the full benefit of competition if we continue to rely on a system of implicit -- as opposed to explicit -- subsidies that make at least some of them unattractive to competitive carriers." In addition to a complete lack of competition, rural consumers will be hurt in other ways by an insufficient Universal Service Fund ("USF"). LECs will stop investing in the

1		infrastructure in rural areas if they cannot cover their costs. Customers in rural
2		areas will see declining service quality and an inability to get advanced services.
3		Such an outcome will occur if the TRA does not establish a sufficient USF.
4		
5	Q.	HOW WILL A UNIVERSAL SERVICE FUND ("USF") WORK FOR HIGH
6		COST AREAS IN A COMPETITIVE ENVIRONMENT?
7		
8	A.	A universal service fund ensures that end users in rural high cost areas will be
9		able to obtain basic local service at rates comparable to urban areas. In a
10		competitive environment, the USF will be available on a competitively neutral
11		basis to all Eligible Telecommunications Carriers ("ETCs") willing to serve a
12		high cost area. When the universal service fund is implemented, ILECs will
13		reduce their rates of services that provide support by the net amount of universal
14		service support that is received. This will complete the process of making
15		implicit support explicit, and will ensure that no ILEC receives any windfall from
16		implementation of the state universal service fund.
17		
18		DEFINITION OF UNIVERSAL SERVICE (ISSUE 1)
19		
20	Q.	SHOULD TENNESSEE USE A STATE OR FEDERAL DEFINITION OF
21		SUPPORTED SERVICES (ISSUE 1a)?
22		

1	A.	Since the federal definition of services to be supported for purposes of universal
2		service is generally consistent with the state definition found in Tennessee Code
3		Annotated § 65-5-207, the federal definition can be used with the addition of
4		Lifeline and Link-Up Tennessee, two services that are targeted at low income
5		customers.

Q. WHAT LINES SHOULD BE INCLUDED FOR SUPPORT FROM A STATE
UNIVERSAL SERVICE FUND ("USF")?

A.

BellSouth agrees with many of the other Parties that primary lines for basic residential service should be supported. With regard to non-primary lines, to the extent that these residential lines are considered part of basic service, they should receive universal service support as well, consistent with Tennessee law. The issue before the TRA is whether non-primary lines constitute "residential basic local exchange service" and thus must be supported. If not supported, non-primary lines must be considered "non-basic service" for price regulation purposes or be exempted from regulation, in which case the marketplace can dictate prices.

Q. SHOULD BUSINESS LINES RECEIVE SUPPORT?

Yes, but only to a very limited extent. While the Tennessee statute does not address business lines, the FCC has determined that single line business lines should be eligible to receive support. To the extent that rates for basic single line business lines do not cover the cost of providing these lines, they should be included in the fund. Support for a single business line should be calculated based on the difference between the cost of the service and the rate that can be charged. Since the rate for business lines are generally above those for residential lines, less support is required for these lines. However, in a rural area, the cost of providing service may exceed the higher rates even for single line business lines and support is needed to keep rural service rates reasonably comparable to urban service rates.

A.

Q. ARE THERE ANY OTHER SERVICES WHICH SHOULD BE INCLUDED AT THIS TIME FOR HIGH COST SUPPORT (ISSUE 1b)?

A. No. The FCC, in its May 8, 1997 Order on Universal Service, indicated that the definition of universal service would be re-addressed by 2001. At that time, both the State and the FCC could determine if additional services need to be incorporated into the basic definition of local service. Therefore, it is not necessary for the TRA to address this issue at this time.

1	Q.	WHAT SERVICES/CAPABILITIES ARE INCLUDED WITHIN THE
2		DEFINITION OF UNIVERSAL SERVICE (ISSUE 1c)?
3		
4	A.	The following capabilities are included in the definition:
5		1. Single party service;
6		2. voice grade access to the public switched network;
7		3. DTMF signaling or its functional equivalent;
8		4. access to 911 emergency services;
9		5. access to operator services;
10		6. access to interexchange service;
11		7. access to directory assistance;
12		8. toll control or toll blocking for qualifying low income customers;
13		9. Lifeline; and
14		10. Link-Up Tennessee.
15		
16	Q.	IS IT NECESSARY TO ADDRESS THE TENNESSEE RELAY CENTER IN
17		THIS PROCEEDING (ISSUE 1d)?
18		
19	A.	No. The TRA should initiate a separate generic case to develop a competitively
20		neutral recovery mechanism for Telephone Relay Service. The charge should
21		appear as a separate line item on end-user bills.

1	Q.	DO PUBLIC INTEREST PAYPHONES NEED TO BE ADDRESSED IN THIS
2		PROCEEDING (ISSUE 1e)?
3		
4	A.	No. This issue should be addressed in a separate generic payphone proceeding.
5		
6		DEFINITION OF SERVICE AREAS (ISSUE 5)
7		
8	Q.	HOW SHOULD SERVICE AREAS BE DEFINED FOR RURAL AND NON-
9		RURAL AREAS FOR PURPOSES OF PROVIDING HIGH COST
10		UNIVERSAL SERVICE SUPPORT (ISSUE 5a)?
11		
12	A.	Both the Telecommunications Act of 1996 ("the Act") and the FCC treated non-
13		rural and rural carriers differently for purposes of defining the service area. For
14		rural carriers, their service areas remain the same (i.e., their current FCC defined
15		"study areas") until the State redefines them. For non-rural carriers, BellSouth
16		supports the FCC's finding that the states should designate relatively small areas
17		(wire centers or census block groups) as service areas for the purpose of
18		determining high cost support effective 1/1/99. Prior to 1/1/99, the service area
19		should correspond to the existing study areas of the non-rural carriers since FCC
20		support will be based on existing study areas. At least one state has taken this
21		interim approach. For example, the North Carolina Utilities Commission, in its
22		10/3/97 Order, ordered that existing study areas of non-rural telephone companies

I		should be their respective interim service areas for universal service support
2		calculations. Since it is unlikely that an intrastate fund will be in place in
3		Tennessee prior to 1/1/99, this should be a workable approach in this State as
4		well.
5		
6	Q.	WHY SHOULD NON-RURAL UNIVERSAL SERVICE AREAS BE SMALL?
7		
8	A.	Small service areas more accurately reflect the way that costs are incurred. Small
9		areas also allow for a new competitive entrant to meet the criteria of an Eligible
10		Telecommunications Carrier without having to serve an extended service area.
11		Thus, it will be easier for new entrants to qualify to receive universal service
12		support which should result in increased competition.
13		
14	Q.	SHOULD AN ETC BE REQUIRED TO PROVIDE SERVICES
15		THROUGHOUT ITS DESIGNATED SERVICE AREA (ISSUE 5b)?
16		
17	A.	Yes. In order to qualify for support, non-rural ETCs are required under the 1996
18		Act to provide the services supported by the USF throughout the particular service
19		area.
20		

1	Q.	SHOULD RURAL CARRIERS BE REQUIRED TO FILE THEIR PROPOSED
2		SERVICE AREA AND CAN OTHERS COMMENT ON THAT FILING (ISSUE
3		5c)?
4		
5	A.	Such a requirement is unnecessary. All rural ETCs should be required to serve
6		their current designated study areas. Since the rural service areas are defined by
7		the Act, no further action is required on the part of these ILECs. Any competitive
8		local exchange carriers that wish to serve rural areas should be required to submit
9		an application to the TRA which would then be released for comment.
10		
11	Q.	ARE YOU AWARE OF ANY AREAS IN TENNESSEE WHICH ARE
12		UNSERVED TODAY (ISSUE 5d)?
13		
14	A.	No. To the best of my knowledge, there are not any unserved areas in Tennessee
15		where residents have requested but not received telephone service.
16		
17		AFFORDABILITY (ISSUE 7)
18		
19	Q.	ARE CURRENT RATES AFFORDABLE (ISSUE 7a)?
20		
21	A.	Yes. Affordable rates are those that generally maintain the current high levels of
22		subscribership. Since Tennesseans enjoy some of the lowest basic residential

1		telephone rates in the United States, existing rates must be considered
2		"affordable." As Dr. Emmerson notes in his testimony, local rates haven't
3		changed in many years in Tennessee and could be higher and still be "affordable."
4		
5		While the "affordable" rate could vary within a given state based upon items such
6		as average income levels or calling scope, the differences should not be too large.
7		The FCC, too, defined subscribership levels as providing relevant information
8		regarding whether consumers have the means to subscribe to universal service as
9		well as to the affordability of rates. The TRA could also assess non-rate factors
10		which could be included in determining affordable rates, including such things as
11		the size and range of a customer's local calling area.
12		
13	Q.	MUST THE TRA USE FEDERAL STANDARDS FOR AFFORDABILITY
14		(ISSUE 7b)?
15		
16	A.	No. In fact, the FCC determined that States should exercise initial responsibility
17		for determining the affordability of rates. It found that subscribership levels
18		provide relevant information regarding whether consumers have the means to
19		subscribe to universal service and represent an important tool in evaluating the
20		affordability of rates.

1	Q.	WHAT SOURCES OF INFORMATION COULD BE USED TO DETERMINE
2		AFFORDABILITY (ISSUE 7c)?
3		
4	A.	The FCC monitors the subscribership levels in each state in its report, Telephone
5		Subscribership in the United States. A high subscribership level, such as
6		Tennessee's 94.5% subscribership, indicates that the current rates are affordable
7		for a very large segment of the population. Programs such as Lifeline and Link-
8		Up Tennessee also aid low income consumers in maintaining their connectivity to
9		the network. The Lifeline program is being expanded by the FCC and this should
10		make local service even more affordable for low income consumers.
11		
12	Q.	ARE THERE ANY OTHER FACTORS WHICH SHOULD BE CONSIDERED
13		(ISSUE 7a)?
14		
15	A.	Yes. Customer income at the state-wide level is an appropriate factor to consider
16		in determining affordability. However, linking high cost universal service support
17		to individual customer income levels is administratively unworkable and should
18		not be considered. It would also appear to violate both state and federal law in
19		that it could result in widely disparate rates between customers. The Act requires

comparable" telecommunications services at reasonably comparable prices.

that all consumers in all areas of the country should enjoy "reasonably

20

<sup>1</sup> Telephone Subscribership in the United States, FCC Industry Analysis Division, October 1997, citing July 1997 subscribership levels.

1		
2		It should be noted that "affordability" is not an absolute concept, and there is a
3		range within which rates can be considered affordable. The lower the rate, the
4		greater the amount of universal service support that will be required.
5		
6		IMPLICIT VS. EXPLICIT SUBSIDIES (ISSUE 8)
7		
8	Q.	WHAT IS THE DEFINITION OF EXPLICIT SUBSIDY AND HOW DOES IT
9		DIFFER FROM IMPLICIT SUBSIDY (ISSUE 8a)?
10		
11	A.	According to Webster's Collegiate Dictionary, "explicit" means that a concept is
12		"fully revealed or expressed without vagueness." Implicit, on the other hand,
13		means that it is "involved in the nature or essence of something though not
14		revealed, expressed, or developed." I would expand on these definitions to note
15		that implicit subsidies are buried in one company's rates, while explicit subsidies
16		are clearly identified, and all companies contribute based on a clear formula.
17		
18		Using these definitions, it is easy to see that universal service support has been
19		maintained as an implicit subsidy in the rates of BellSouth and other ILECs in the
20		past. ILECs kept the rates for local basic exchange service low through subsidy
21		flows from toll, access, business and other service such as vertical features.

These subsidy flows cannot be maintained in a competitive environment.

These subsidy flows cannot be maintained in a competitive environment. Even limited competition could quickly erode the implicit support that is currently relied upon to fund universal service. For example, in Tennessee, some sixty percent (60%) of our revenues come from about eight percent (8%) of the land area we serve, which are the urban areas in the state. In addition to revenues being concentrated geographically, they are also heavily concentrated as 20% of BellSouth's business customers provide 79% of our business revenues. See Exhibit PFM-1 attached.

Q.

A.

IS IT NECESSARY FOR THE TRA TO SEPARATELY QUANTIFY THE

AMOUNT OF EXISTING IMPLICIT SUPPORT IN CURRENT RATES (ISSUE

8b)?

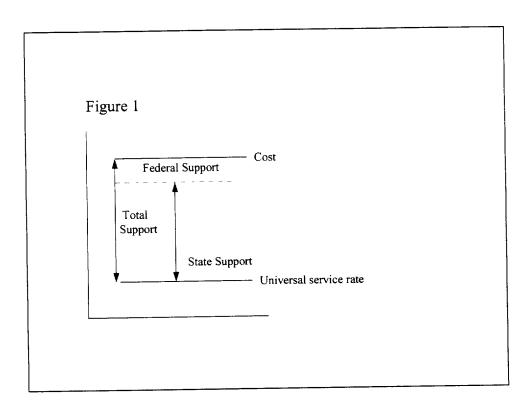
No. Any calculation of implicit support should be strictly tied to the cost and rate of the supported services. Basically, the total amount of implicit support can be determined easily once a cost methodology is selected. The total amount of implicit support is calculated as the difference between the cost of universal service, calculated for small areas such as census block groups or wire centers, minus the maximum revenue that can be collected for universal service. This is illustrated in Figure 1 below. Since the national fund will deal with some of the implicit support, the federal support should be subtracted from the total in order to

arrive at the state amount of explicit high cost universal service support that should be provided on a monthly per line basis.

3

1

2



**4 5** 

Q. CAN YOU PROVIDE EXAMPLES OF HOW THE STATE FUND SUPPORT
 WOULD BE CALCULATED?

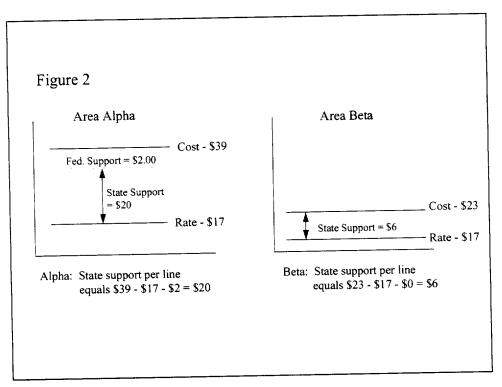
8

Yes. Assume that there is a company that serves two census block groups called
Alpha and Beta and that the average universal service rate for these areas is

\$17.00.^2 As can be seen in Figure 2, the state support in area Alpha equals the
difference between the cost and the rate minus the federal amount of per line

<sup>&</sup>lt;sup>2</sup> Based on the average revenues received per line from universal services, which include only the residential basic rate, Touch-tone and the subscriber line charge.

support. The federal residential support is estimated at 25% of the difference between the \$39 cost and a nationwide \$31 revenue benchmark. Thus, the state support, on a per line basis, for area Alpha would equal \$39 minus \$17 minus \$2, or a total of \$20 per line. For area Beta, the support would equal \$23 minus \$17 minus zero (there is no federal support because the cost is less than the revenue benchmark), or a total of \$6.00 per line in state high cost support. This monthly per line high cost support would be available to any eligible carrier that serves a customer in the high cost area.



Q. HOW SHOULD THE TRA MAKE IMPLICIT SUPPORT EXPLICIT (ISSUE 8c)?

1 A. The state amount of implicit support should be replaced by explicit support
2 through the establishment of a state universal service funding mechanism. Since
3 the national fund will deal with some of the implicit support, the federal support
4 should be subtracted from the total in order to arrive at the state amount of explicit
5 high cost support that should be provided on a monthly per line basis.

## PRELIMINARY COST MODELING ISSUES (ISSUE 9

Q. WHAT IS THE PROPER TERRITORIAL SCOPE OF UNIVERSAL SERVICE
 RATES (ISSUE 9b)?

A.

Currently, ILECs have rates that vary by rate groups, which are comprised of exchanges. For now, rate groups are still appropriate, at least for ILECs. Rate groups are already established and approved by the TRA and are linked to the particular service area of an ILEC. It is not appropriate to develop average rates to a state level for a specific carrier. For purposes of universal service support for a particular designated service area, the rate used to determine the level of support should be either the flat rate business or flat rate residential charge for that specific wire center.

1	For new entrants, the TRA needs to decide if the territorial scope for rates set
2	forth by the new entrant is reasonable. The scope would not need to match
3	exactly the scope used by incumbents.

Q. WHAT IS THE PROPER LEVEL TO WHICH DEAVERAGING SHOULD BE
 APPLIED IN THE COST STUDIES (ISSUE 9c)?

A. In order to identify the need for and target the support to high cost areas, small geographic segments such as serving wire centers or census block groups should be utilized to determine costs. As I previously stated, the appropriate rate to use against these costs would be the rate for that particular wire center.

Q. SHOULD NON-RURAL SERVICE AREAS BE DEFINED AS "WIRE CENTER" OR "CENSUS BLOCK GROUPS ('CBG')"?

A. Both geographical areas have benefits and drawbacks. A wire center designation is easier to administer; however, it averages the cost of providing service over a larger geographical area. For example, use of a wire center would enable a carrier to receive the same level of support for each customer served within the wire center, even though some are in a low-cost "main street" area while other customers are in a higher cost, rural area outside of town. Targeting support at the CBG area has the reverse benefits and drawbacks. It better targets high cost areas

but is harder to administer due to the greater number of CBGs. For example,

BellSouth serves approximately 200 wire centers in Tennessee; there are over

3 3400 CBGs within these wire centers.

Whatever geographical area is designated for cost purposes, it should be consistent for all providers. One provider should not be able to get support on a CBG basis and another on a wire center basis. High cost support should be provided on a consistent geographical basis.

Q. IS IT NECESSARY FOR RURAL AND NON-RURAL STUDY AREAS TO BE COMBINED IN THE COST STUDIES (ISSUE 9d)?

A.

No. Indeed, there is no requirement for all companies to be combined or to use the same cost methodology for rural and non-rural carriers. The FCC adopted the Joint Board's recommendation to bifurcate the costing methodology between rural and non-rural companies. The State Joint Board members favored having a period prior to the activation of a forward-looking mechanism in which rural carriers would receive support based on embedded costs. The FCC determined that non-rural carriers would begin to receive support based on forward-looking economic cost on January 1, 1999. It determined that rural carriers' support would not be based on forward-looking economic cost until further review (and no sooner than the year 2001). (FCC Order Par. 203).

1		
2	Q.	WHICH REVENUES SHOULD BE INCLUDED IN THE REVENUE
3		BENCHMARK (ISSUE 9j)?
4		
5	A.	Any revenue benchmark should only include the revenue for local basic service
6		and any applicable subscriber line charges. It is inappropriate to include within
7		any revenue benchmark services that include the implicit support, some of which
8		is competitively vulnerable, which explicit universal service support is meant to
9		replace. The benchmark is, in essence, the maximum rate allowed to be charged
10		for basic local exchange service (including the subscriber line charge) in a
11		particular service area.
12		
13	Q.	DO THE PROXY COST MODELS INCLUDE THE COST OF VERTICAL,
14		TOLL, OR ACCESS SERVICES IN THEIR CALCULATION OF UNIVERSAL
15		SERVICE COSTS?
16		
17	A.	No. The proxy cost models only calculate the cost of basic local service. It is
18		inappropriate to include the costs of these other services in the universal service
19		cost models. The models are supposed to be universal service cost models.
20		Vertical services, toll and access are not included in the definition of universal

service, and should not be included in the cost models.

1	Q.	WHAT TIME PERIOD SHOULD BE USED TO CALCULATE THE
2		REVENUE BENCHMARK (ISSUE 9k)?
3		
4	A.	If the TRA determines that the existing maximum rate for basic local service (flat
5		rate residential and flat rate single line business) should be used, then no time
6		period decision is required since the effective tariff rate would be used. If the
7		tariff rate is allowed to increase over time, then the support level should be
8		adjusted accordingly.
9		
10	Q.	ARE THERE OTHER ISSUES YOU WOULD LIKE TO ADDRESS TODAY?
11		
12	A.	Yes. I would like to briefly address issue numbers 2, 3, 4, 6, 10, 11, 12, 13, 14
13		and 15 which many of the Parties have proposed to stipulate.
14		
15		PROVIDING ALL ELEMENTS OF UNIVERSAL SERVICE (ISSUE 2)
16		
17	Q.	WILL ALL CARRIERS BE ABLE TO PROVIDE ALL ELEMENTS OF
18		UNIVERSAL SERVICE SUPPORT (ISSUE 2)?
19		
20	A.	Probably not. There may be some rural ILECs that will be unable to provide
21		single party service throughout their serving areas to any customer that requests it.
22		Similarly, there may be some ILECs that cannot provide E911 service. BellSouth

agrees with many of the Parties that the TRA has the authority to certify telecommunications service providers in Tennessee as ETCs based on the Federal requirements outlined in Section 214(e)(1). The FCC does allow an exception to these requirements. Upon petition to the TRA, a carrier incapable of providing single party service, E-911, or toll limitation services may receive Federal universal service support for a grace period to allow for completion of network upgrades to provide these components.

Q. HOW SHOULD THE TRA ADDRESS "EXCEPTIONAL CIRCUMSTANCES" (ISSUE 2a)?

A.

The TRA should follow the FCC's rules for addressing "exceptional circumstances." The TRA also should follow the FCC's recent lead, which suggests that toll limitation service be defined as either toll blocking or toll control. This distinction is important. Toll control, where a customer can elect to spend up to a certain amount per month in toll charges, is not dependent upon completion of network upgrades. Toll control requires "real time billing" of toll charges and is dependent upon timely receipt of information from toll providers. Although the FCC, in its May 8th Order, said that ETCs need to provide toll limitation service which the FCC defined in its rules as toll blocking and toll control, the issue is presently under reconsideration at the FCC. The FCC, itself, in its FNPRM in Docket 96-45, released September 4, 1997, defines "toll-

1		limitation services as either voluntary toll blocking, which allows customers to
2		block toll calls, or toll control, which allows customers to limit in advance their
3		toll usage per month or billing cycle." (emphasis added, page 2) Therefore, the
4		TRA should allow a service provider to provide either toll blocking or toll control
5		to satisfy the toll limitation eligibility requirement.
6		
7		ELIGIBILITY (ISSUE 3)
8		
9	Q.	WHAT PROVIDERS ARE ELIGIBLE TO RECEIVE SUPPORT
10		(ISSUE 3)?
11		·
12	A.	Based on the consensus of most of the Parties in this proceeding, any carrier who
13		can demonstrate compliance with the requirements of Section 214(e)(1) of the Act
14		is eligible to receive Federal universal service support.
15		
16	Q.	WHAT PROCEDURES WILL THE TRA USE FOR DESIGNATING ETCs
17		(ISSUE 3a)?
18		
19	A.	The TRA has already set forth the procedures. Carriers should file a motion or
20		petition with the TRA for its approval consistent with the procedures set forth in
21		the TRA's November 5, 1997 Order in this docket. The TRA must ensure that the
22		ETC at a minimum has met the requirements of Section 214(e)(1) and applicable

1		FCC regulations. However, a state is not prohibited from establishing additional
2		criteria for designation of ETCs in connection with the state's Universal Service
3		Fund, consistent with Section 254(f). For example, the TRA should require an
4		ETC to offer the supported services on a stand-alone basis at an "affordable rate"
5		in order to be eligible to receive high cost support. This is consistent with the
6		requirements of T.C.A. Section 65-5-207(a).
7		
8	Q.	SHOULD THOSE COMPANIES NOT UNDER TRA AUTHORITY BE
9		DESIGNATED AS AN ETC (ISSUE 3b)?
10		
11	A.	Even if a company is not under TRA authority, it should be eligible for
12		designation as an ETC if it meets the requirements of Section 214(e)(1) and is
13		willing to comply with the TRA's procedures, rules, and regulations governing
14		universal service support.
15		
16	Q.	SHOULD THE TRA ADOPT THE FEDERAL ADVERTISING GUIDELINES
17		(ISSUE 3c)?
18		
19	A.	Yes. Advertising guidelines are set out in the 1996 Act in Section 214(e) and
20		Tennessee should adhere to them.
21		

1	Q.	SHOULD THE TRA ADOPT THE FEDERAL FACILITIES REQUIREMENTS
2		(ISSUE 3d)?
3		
4	A.	Yes. The TRA should require that carriers provide service throughout the serving
5		area using either their own facilities or a combination of their own facilities and
6		resale. However, I would like to clarify some particulars with regard to receipt of
7		support. In a resale situation, the underlying provider of the actual facilities
8		should receive the universal service support, not the reseller. This is consistent
9		with the federal regulations. With respect to purchasers of unbundled network
10		elements ("UNEs"), BellSouth disagrees with the way the FCC has proposed to
11		provide high cost support to these purchasers. The FCC does not take into
12		account any revenues which will be received from the end user. Any support paid
13		to the UNE purchaser should include these revenues.
14		
15		CARRIER OF LAST RESORT (ISSUE 4)
16		
17	Q.	IS THE CONCEPT OF A CARRIER OF LAST RESORT ("COLR") STILL
18		RELEVANT (ISSUE 4a)?
19		
20	A.	BellSouth agrees that the term "ETC" and "COLR" are synonymous when there is
21		only one carrier serving a particular area. However, this concept of carrier of last
22		resort has not been replaced by federal law. At some point in the future, when all

consumers in all areas of Tennessee have a choice of local service providers and 1 all companies are free to enter or leave any particular area, such a designation may 2 3 become unnecessary.

4

IF SO, HOW DO WE DESIGNATE (ISSUE 4b)? 5 Q.

6

Since a "Carrier of Last Resort" designation is not relevant to this proceeding, 7 A. there is no need to determine its designation at this time. 8

9

CAN A CARRIER OF LAST RESORT WITHDRAW SERVICE, AND, IF SO, 10 Q. HOW (ISSUE 4c)? 11

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I have rephrased the question to read "Can an eligible telecommunications carrier A. withdraw service, and, if so, how?" An ETC shall be eligible to withdraw service as soon as there is another ETC providing service in a given area. The provisions governing relinquishment of the ETC designation are contained in Section 214(e)(4) of the 1996 Act. The ETC is required to provide advance notice to the State Commission of any relinquishment. The remaining ETCs will need to ensure to the Commission that all customers continue to get service. The State Commission shall establish a time of one year or less after the relinquishment is approved for the remaining ETCs to complete the necessary construction or purchases of plant in order to ensure that all customers continue to receive service.

1		
2		WHICH CARRIERS/PROVIDERS MUST CONTRIBUTE (ISSUE 6)
3		
4	Q.	SHOULD THE TRA USE THE FEDERAL DEFINITION OF
5		TELECOMMUNICATIONS CARRIER (ISSUE 6a)?
6		
7	A.	Yes. The TRA must adopt the Federal definition as set forth in Section 3(a)(49)
8		of the Act.
9		
10	Q.	WHAT CARRIERS/PROVIDERS SHOULD PROVIDE SUPPORT TO AN
11		INTRASTATE USF (ISSUE 6)?
12		
13	A.	Section 254(f) of the Act requires "[e]very telecommunications carrier that
14		provides intrastate telecommunications services shall contributeto the
15		preservation and advancement of universal service in that state." Therefore, even
16		if a carrier is not under the authority of the TRA, such as wireless providers or
17		Cooperatives, these carriers are required to contribute to the State USF. This does
18		not mean, however, that these carriers would then become subject to general TRA
19		authority or jurisdiction.
20		

1		It should be noted for assessment purposes that telecommunications service does
2		not include items such as telephones, rents, and credit card revenues. These items
3		are not telecommunications services and their revenues should not be included.
4		
5		LOW INCOME SUPPORT (ISSUE 10)
6		
7	Q.	SHOULD THE TRA CHANGE ITS EXISTING LIFELINE PROGRAM (ISSUE
8		10a)?
9		
10	A.	Since the TRA has already approved the additional \$1.75 made available by the
11		FCC, the TRA should notify the FCC of this approval as well as certify that a
12		Lifeline program exists in Tennessee which will enable low income consumers to
13		receive another \$1.75 of federal support. In order to receive these Federal benefits
14		upon their 1/1/98 effective date, the TRA must send a one-page letter to the
15		Universal Service Administrative Company ("USAC"), with a copy to the FCC.
16		The FCC must receive such letter by December 31, 1997.
17		
18	Q.	WHAT STANDARDS AND PROCEDURES SHOULD BE ADOPTED TO
19		ADDRESS WAIVER REQUIREMENTS TO THE NON-DISCONNECT RULE
20		(ISSUE 10b)?
21		

1	A.	The TRA should adopt the waiver requirements set forth in the FCC's Rules,
2		Section 54.401(b)(1).
3		
4	Q.	WHAT FUNDING MECHANISM SHOULD BE ADOPTED FOR
5		INTRASTATE LOW INCOME PROGRAMS (ISSUE 10c)?
6		
7	A.	Consistent with the Federal programs, intrastate low income programs should be
8		funded out of the USF. This would enable low income consumers to change
9		service providers and still remain eligible for subsidy of telecommunications
10		services. It would also be competitively neutrala tenet which should apply to all
11		aspects of the USF.
12		
13		SUPPORT FOR SCHOOLS AND LIBRARIES (ISSUE 11)
14		
15	Q.	WHAT SUPPORT, IN ADDITION TO THE FEDERAL SUPPORT ALREADY
16		ADOPTED BY THE TRA, SHOULD BE PROVIDED TO SCHOOLS AND
17		LIBRARIES ?
18		
19	A.	T.C.A. Section 65-5-208(a)(1) requires pre-existing state discounts for schools
20		and libraries be continued. No additional state support should be provided.
21		

1	Q.	IS AN EXPLICIT SUPPORT MECHANISM NECESSARY FOR EXISTING
2		STATE EDUCATIONAL DISCOUNTS?
3		
4	A.	Yes. Since pre-existing state discounts for schools and libraries are required,
5		support for these discounts should come from the State USF and be portable to all
6		providers of service.
7		
8	Q.	SHOULD THE TRA SPECIFICALLY STATE WHAT DISCOUNTS ARE
9		AVAILABLE IN TENNESSEE, AND AT WHAT LEVELS (ISSUE 11a)?
10		
11	A.	Yes. The TRA has already adopted the FCC's discount matrix and the level of
12		discounts.
13		
14	Q.	HOW DOES THE TRA ADDRESS PRE-DISCOUNT PRICE COMPLAINTS
15		(ISSUE 11b)?
16		
17	A.	The existing complaint procedures should be followed for any type of universal
18		service complaint, including pre-discount price complaints.
19		
20		HEALTH CARE SUPPORT (ISSUE 12)
21		

1	Q.	SHOULD THE TRA PROVIDE SUPPORT IN ADDITION TO THAT
2		PROVIDED FOR BY THE ACT AND THE FCC (ISSUE 12)?
3		
4	A.	No. The Federal funding for this segment of consumers is sufficient; no intrastate
5		support should be provided.
6		
7		MONITORING OF SUPPORT (ISSUE 13)
8		
9	Q.	HOW SHOULD THE TRA MONITOR PROVISION OF SUPPORTED
10		SERVICE TO DETERMINE IF SUPPORT IS BEING USED AS INTENDED
11		UNTIL COMPETITION DEVELOPS (ISSUE 13)?
12		
13	A.	Most of the Parties agreed that the TRA should continue to monitor the quality of
14		service provided by ETCs until there are two or more ETCs offering services in a
15		given service area. Once that point is reached, I believe the competitive
16		marketplace can be relied upon to monitor service quality, rather than regulatory
17		rules.
18		
19	Q.	DOES THE TRA NEED COST ALLOCATION RULES AS ACCOUNTING
20		SAFEGUARDS TO DETERMINE THAT SERVICES SUPPORTED DO NOT
21		BEAR MORE THAN A REASONABLE SHARE OF JOINT AND COMMON
22		COST OR UNNECESSARILY SUBSIDIZE A SERVICE (ISSUE 13a)?

1		
2	A.	No cost allocation rules and accounting safeguards are necessary because
3		universal service joint and common costs will be determined in Phase II of this
4		proceeding.
5		
6	Q.	ARE ANY CHANGES IN STATE LAWS OR RULES NEEDED
7		(ISSUE 14)?
8		
9	A.	I am not an attorney so I cannot provide a legal perspective on what statute or
10		rule changes should be made. However, there does not appear to be any conflict
11		between the federal universal service provisions and Tennessee law which would
12		necessitate changes in state statutes or rules. Such changes could become
13		necessary depending upon how the TRA resolved certain issues in this
14		proceeding.
15		
16		ACCESS CHARGE REFORM (ISSUE 15)
17		
18	Q.	SHOULD ACCESS CHARGE REFORM ISSUES BE INCORPORATED INTO
19		THE SCHEDULE ADDRESSING PHASE II OF THE UNIVERSAL SERVICE
20		PROCEEDING (ISSUE 15)?

BellSouth, in its response to the July 28, 1997 request for information from the A. Hearing Officer in Docket No. 97-00889, stated that no access charge reductions can be implemented until an explicit universal service fund has been created. BellSouth continues to believe that the TRA cannot resolve all of the issues in the access reform proceeding until issues in Docket No. 97-00888 have been decided. Clearly the two dockets are closely related; however, the TRA must recognize that switched access is not the only source of implicit support. Any access, toll, business or other service reductions should be governed by the size of the state universal service fund. 

## O. PLEASE SUMMARIZE YOUR TESTIMONY.

A.

The emerging competitive environment can no longer support the current system of keeping basic local exchange service rates low through implicit subsidies. This tenet is recognized by Congress in its Telecommunications Act of 1996, the FCC in its May 8, 1997 Order, and Tennessee in the fact that it has instituted this proceeding. Substantial changes in the funding of universal service are required to maintain the availability of high cost quality service in all areas of Tennessee. I believe that there are a number of areas where agreement has been reached by most of the Parties in this proceeding. The TRA should build upon this consensus to frame a USF which meets the needs of the state's consumers and its telecommunications services providers.

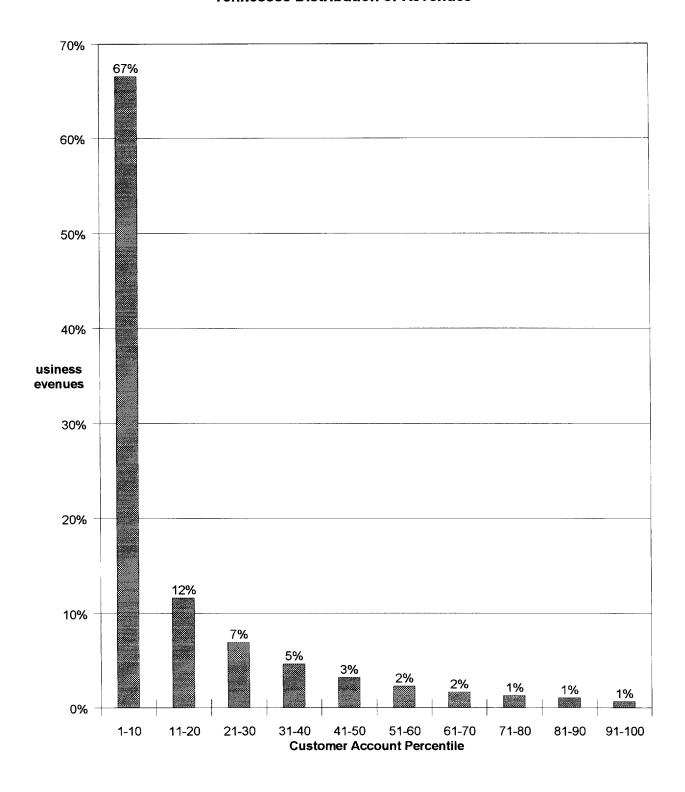
1

2 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

3

4 A. Yes, it does.

#### **Tennessee Distribution of Revenues**



#### AFFIDAVIT

STATE OF GEORGIA

COUNTY OF FULTON

BEFORE, ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Peter F. Martin, BellSouth Telecommunications Inc., who, being by me first duly sworn, deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 97-00888 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be as set forth in the annexed Testimony consisting of 36 pages and exhibit (s).

PETER F. MARTIN

SWORN TO AND SUBSCRIBED BEFORE ME this the <u>5</u> th day of November, 1997.

My Commission expires:

Notary Public, Fulton County, GA My Commission Expires Sept. 10, 2000

### CERTIFICATE OF SERVICE

I hereby certify that on November 12, 1997, a copy of the foregoing document was served on the parties of record, via U. S. Mail, postage pre-paid, addressed as follows:

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Pottick Turns

1		
2		DIRECT TESTIMONY OF DR. RICHARD D. EMMERSON
3		ON BEHALF OF BELLSOUTH TELECOMMUNICATIONS, INC.
4		BEFORE THE TENNESSEE REGULATORY AUTHORITY
5		DOCKET NO. 97-00888: Phase I NON-COST ISSUES
6		<b>NOVEMBER 12, 1997</b>
7		
8	I.	INTRODUCTION
9		
10	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
11	A.	My name is Richard D. Emmerson. I am the President and CEO of INDETEC
12		International, Inc. My business address is 445 Marine View Avenue, Del Mar,
13		California 92014.
14		
15	Q.	PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK
16		EXPERIENCE.
17	A.	My academic qualifications include a Ph.D. in economics from the University of
18		California, Santa Barbara in 1971. From 1971 through 1979, I was a full-time
19		member of the Economics Department at the University of California, San Diego
20		("UCSD"). Since 1979, I have taught continuously (part time) at UCSD. I was
21		the Director of the Executive Program for Scientists and Engineers ("EPSE") at
22		UCSD during 1990-1991, and I continue to teach courses on costing and pricing
23		for EPSE at the present time. I have written articles in professional economic
24		journals, and I have performed research projects for government agencies and
25		private industry.
26		
27		My work experience includes past positions as Senior Vice President of Criterior
28		Incorporated, President of the Institute for Policy Analysis, and President of
29		Economic Research Associates. These firms performed economic analysis for a
30		range of clients, including "unregulated" or competitive firms, regulated firms,

1		government agencies, regulatory commissions, and trade associations. INDETEC
2		International, Inc. provides consulting and training services to international
3		telephone companies, Lucent Technologies, the United States Telephone
4		Association, Bellcore, interexchange companies, as well as to partners and
5		managers of large accounting and consulting firms. During the past 20 years, I
6		have taught a wide variety of courses ranging from basic economics for
7		telecommunications to highly specialized courses in incremental cost study
8		methodology.
9		
10	Q.	HAVE YOU TESTIFIED PREVIOUSLY BEFORE A REGULATORY
11		AGENCY?
12	A.	Yes. I have testified before many public service commissions on access charges,
13		bypass, rate structure, competition, terminal equipment pricing, network services
14		pricing, and cost analyses in the jurisdictions of Alabama, California,
15		Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky,
16		Louisiana, Maine, Michigan, Minnesota, Mississippi, Montana, Nevada, North
17		Carolina, Oklahoma, Pennsylvania, Tennessee, Virginia, Washington,
18		Washington D.C., and Wisconsin, as well as in Canada. Over the course of the
19		past 15 years, my provision of expert witness testimony in over 60
20		telecommunications regulatory hearings has aided in establishing appropriate cost
21		standards in several jurisdictions within the industry. I have worked for regulators
22		and telephone companies in nearly a dozen foreign countries during the past three
23		years. I have also served as an expert witness in antitrust and business litigation
24		cases.
25		
26	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
27	A.	I will discuss issues 7, 8 and 9j of the Phase I, non-cost issues list established for
28		this case. I generally examine the concept of affordability and the economically
29		proper standard for measuring a subsidy. I distinguish between an explicit and
30		implicit subsidy and how implicit subsidies are counter to the

Telecommunications Act, the FCC Universal Service Order and sound economics.

2 Universal service subsidies must become explicit and competitively neutral. I

also address rate rebalancing, which affects the size of the required universal

service fund and is a good first step, in developing a sound public policy plan as

the industry becomes more competitive. Finally, my testimony considers the

6 revenues to be included in calculating the required universal service fund.

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#### II. AFFORDABLE BASIC LOCAL TELEPHONE SERVICE (TRA ISSUE # 7)

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#### 10 Q. WHAT DOES "AFFORDABILITY" MEAN?

A. There is not a precise definition of affordability in economics. However, in the telecommunications industry the concept of affordability arises in two related contexts. First, affordability is sometimes used to refer to the aggregate proportion of customers who subscribe to basic local service (i.e., the residential telephone penetration rate). Second, affordability is sometimes discussed as it relates to individual customers by considering, for instance, the proportion of household income that is spent on basic local exchange service. Obviously, the percentage of household income that is spent on basic local telephone service depends on both the price of basic service and the income of the household. The resulting percentage varies substantially across households because of substantial variations in income.

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#### 23 Q. WHAT ARE LOCAL TELEPHONE PENETRATION RATES IN TENNESSEE?

A. As of July 1997, residential telephone penetration in Tennessee was 94.5% while the penetration rate in the United States in total was 93.9%. For Tennessee, this represents a substantial increase in penetration from 1983 when the state penetration level of 87.6% was below the national average of 91.4%.

<sup>&</sup>lt;sup>1</sup> *Telephone Subscribership in the United States*, FCC Industry Analysis Division, October 1997. These rates may "be on the low side," page 1; i.e., actual penetration rates may be somewhat higher than those reported here.

1		
2	Q.	DOES ECONOMICS INDICATE WHY SOME PEOPLE CONTINUE TO
3		CHOOSE NOT TO PURCHASE BASIC LOCAL TELEPHONE SERVICE
4		EVEN THOUGH IT MAY BE AFFORDABLE?
5	A.	Yes. Economics indicates that individual consumers each choose a combination
6		of goods and services (including telecommunications services) to match their
7		incomes, tastes and preferences. Virtually no consumer can choose to purchase
8		all products and services in the market place. Consumers weigh the value
9		received from a service against the price paid for the service. Different consumers
10		will choose different products and services based on their tastes and preferences.
11		
12		Studies also indicate that the price of basic local exchange service is seldom the
13		primary reason a household does not subscribe to basic telephone service. <sup>2</sup> Other
14		factors that cause households not to subscribe to telephone service include the
15		following:
16		high long distance bills
17		• multiple people in a rental unit leading to disputes over phone usage
18		<ul> <li>an inability to control long distance calling</li> </ul>
19		• other services such as cable television that are considered more important
20		<ul> <li>customers staying at a location for a short duration</li> </ul>
21		• ease of access to another phone
22		a choice in lifestyle
23		
24	Q.	HOW HAVE LOCAL TELEPHONE RATES CHANGED IN THE UNITED
25		STATES AS COMPARED TO PRICES IN GENERAL AND COMPARED TO
26		PRICES IN TENNESSEE?

<sup>&</sup>lt;sup>2</sup> See for example, Steve G. Parsons "The Economic Necessity of an Increased Subscriber Line Charge (SLC) in Telecommunications," 48 *Administrative Law Review* 227, 1996, (publication of the American Bar Association), citing several studies dealing with this issue.

1	1 1.	The fact reports the combanies price made for the period 1902 to 1996 to the
2		goods and services (3.6%) and for telecommunications services (2.2%). <sup>3</sup> In other
3		words, during this time period the prices of other goods and services in the
4		economy rose over 1.6 times as fast as the prices for telecommunications services
5		In Tennessee, most BellSouth residential customers have paid the same local rate
6		since 1984. In some instances, customer's basic rates are lower today than in
7		1984. The rates for residential Flat Rate Main Station Line Service in Tennessee
8		currently range from \$7.55/month (Group 1) to \$12.15/month (Group 5).4 The
9		rates in Tennessee for every rate group are below the 1995 national average of
10		\$13.66 for flat rate service. <sup>5</sup>

The ECC reports the consumer price index for the period 1982 to 1995 for all

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Α

In addition, BellSouth offers "Regionserv" (an optional local measured service plan) in Tennessee with rates of \$4.50 (rate groups 1-3) and \$5.50 (rate groups 4 and 5).<sup>6</sup> These rates are also lower than the national average of \$6.60 for the lowest available comparable rates.<sup>7</sup> Tennessee also participates in the Linkup and Lifeline programs.<sup>8</sup>

<sup>&</sup>lt;sup>3</sup> FCC Statistics of Communications Common Carriers, 1995/1996 Edition, table 8.2.

<sup>&</sup>lt;sup>4</sup> South Central Bell Telephone Company Tennessee, General Subscriber Services Tariff, A3 Basic Local Exchange Service, A3.2.1, effective February 10, 1991.

<sup>&</sup>lt;sup>5</sup> FCC Statistics of Communications Common Carriers, 1995/1996 Edition, table 8.4.

<sup>&</sup>lt;sup>6</sup> BellSouth Telecommunications, Inc. Tennessee, General Subscriber Services Tariff, A3 Basic Local Exchange Service, A3.2.1, effective April 1, 1997.

<sup>&</sup>lt;sup>7</sup> FCC Statistics of Communications Common Carriers, 1995/1996 Edition, table 8.4.

<sup>8 &</sup>quot;Lifeline" is a federally mandated subsidized basic service offering for low income households, funded by interexchange carriers. See In re MTS and WATS Market Structure Amendment of Part 67 of the Commission's Rules and Establishment of a Joint Board, Recommended Decision and Order, 2 FCC Rcd 2324 (1984). "Link-up-America" reduces the one-time telephone service connection charge. See In re MTS and WATS Market Structure Amendment of Part 67 of the Commission's Rules and Establishment of a Joint Board, Recommended Decision and Order, 52 Fed Reg 19.896 (18 May 1987).

1	Q.	HAS TRADITIONAL RATEMAKING IN THE UNITED STATES HAD A
2		TENDENCY TO MAKE BASIC LOCAL EXCHANGE INCREASINGLY
3		AFFORDABLE?
4	A.	Yes. Under traditional rate making, state commissions tended to establish prices
5		for nonbasic services to produce high levels of contribution to help cover the
6		Incumbent Local Exchange Carrier's (ILEC's) shared and common costs and to
7		provide an internal or implicit subsidy to basic local exchange service (at least for
8		residential customers). This has lead to falling real (inflation adjusted) local
9		telephone prices over time and increasingly affordable local rates.
10		
l 1	Q.	WHAT DO THESE RESULTS IMPLY FOR ENSURING AFFORDABLE
12		LOCAL TELEPHONE SERVICE IN TENNESSEE?
13	A.	Residential customers clearly have access to local telephone service that is
14		affordable under current rates. Indeed, the evidence indicates that rates for basic
15		local exchange service could increase and still be affordable for residential
16		customers generally.
17		
18	Q.	WHAT ECONOMIC CONCLUSIONS CAN YOU OFFER WITH REGARD TO
19		CONTINUED ASSURANCE OF AFFORDABLE RATES IN THE FUTURE?
20	A.	First, while subsidies are often useful to achieve a public policy objective, they
21		are generally economically inefficient. Subsidies should therefore be minimized
22		to the extent possible. Second, to the extent that subsidies have to exist,
23		economics indicates that explicit subsidies (funded in a competitively neutral
24		manner) are far superior to implicit subsidies.
25		
26	III.	DEFINING IMPLICIT AND EXPLICIT SUBSIDIES (TRA ISSUE #8)
27		
28	Q.	HOW HAVE UNIVERSAL SERVICE OBLIGATIONS GENERALLY BEEN
20		MET IN THE PAST?

1 A. Typically, residential basic local exchange services have been priced below cost
2 to help ensure affordable rates and universal service. This implicit subsidy has
3 traditionally been paid for by other services that are priced well in excess of cost
4 (e.g., intraLATA toll, IXC switched access, vertical services and business
5 services).

However, these high-priced, high contribution services are attractive points of entry for the ILEC's competitors. As a result, these sources of subsidy cannot be sustained in a competitive marketplace. On the other hand, new entrants will not compete for unprofitable customers, and are less likely to compete for customers providing only small contribution margins; such customers are likely to be avoided by competitors and left to be served by the ILECs. Therefore, a viable and sound universal service funding mechanism must be compatible with competition in the future.

# Q. WHAT IS THE DISTINCTION BETWEEN EXPLICIT AND IMPLICIT SUBSIDIES?

18 A. First, it is useful to define a subsidy. A service receives a subsidy when its
19 revenues are less than its costs. Who pays for this subsidy is what determines
20 whether it is an explicit or an implicit subsidy. An implicit subsidy is one that is
21 paid for by the other services provided by the company or by the stockholders of
22 the company. An explicit subsidy is one that would be more broadly funded by
23 all telecommunications providers sharing in the universal service burden.

# Q. IS IT POSSIBLE TO CONTINUE TO RELY ON TRADITIONAL IMPLICITSUBSIDIES?

27 A. No. The high prices for competitive services necessary to provide an implicit
28 subsidy cannot persist in a competitive environment since rivals will undercut the
29 ILEC's "high" prices. Prices that fund implicit subsidies are simply not
30 sustainable in a competitive environment in the long term. In the increasingly

1	competitive telecommunications environment, explicit subsidies funded in a
2	competitively neutral manner must replace the traditional implicit subsidies.
3	

Q. DOES THE TELECOMMUNICATIONS ACT DISCUSS EXPLICIT FUNDING FOR UNIVERSAL SERVICE?

Yes. The Act states at section 254 (b)(4): "Equitable and nondiscriminatory contributions. --All providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service." At section 254 (e), in discussing universal service support, the Act also states: "[a]ny such support should be explicit and sufficient to achieve the purposes of this section." The FCC Universal Service Order clearly discusses the need and the requirement for making subsidies explicit. Even the FCC Local Competition Order states: "The Act also recognizes, however, that universal service cannot be maintained without reform of the current subsidy system. The current universal service system is a patchwork quilt of implicit and explicit subsidies. These subsidies are intended to promote telephone subscribership, yet they do so at the expense of deterring or distorting competition." (paragraph 5).

A.

This approach is consistent with the Tennessee Code Annotated section 65-5-207 and its discussion of "alternate universal service support mechanisms" which must be administered "in a competitively neutral manner, …"

<sup>&</sup>lt;sup>9</sup> In re Federal-State Joint Board on Universal Service, First Report and Order, Report and Order, Released May 8, 1997 (FCC 96-45)[hereinafter, Universal Service Order]. See for example: "This 'patchwork quilt of implicit and explicit subsidies' generates inefficient and undesirable economic behavior." (paragraph 30); "We find that requiring price cap carriers to cover their costs of providing universal service through internal cross-subsidies, as Time Warner suggests, would violate the statutory directive that support for universal service be 'explicit.' (paragraph 145); "[t]oday, universal service is achieved largely through implicit subsidies." (paragraph 10).

Traditional implicit funding for universal service is not equitable, or competitively neutral, nor is it economically sustainable. Universal service funding must now become explicit.

- Q. WHAT ARE THE ECONOMIC CHARACTERISTICS OF A SOUND POLICY
   FOR PROVIDING, AND FUNDING, UNIVERSAL SERVICE?
  - A. In the new, increasingly competitive environment, an economically sound and viable universal service provision and funding mechanism must be efficient. The size of the subsidy requirement and the sources of subsidy should be made explicit and administered in a competitively neutral manner. That is, once the level of subsidy necessary to maintain universal service is determined, it should be funded in a way that is efficient and distorts the competitive process as little as possible.

This objective itself requires that the provision of universal service and the contribution assessment be borne by all competitors -- both incumbents and new entrants -- in a manner which preserves each competitor's relative efficiency as it vies for the patronage of customers in the market. When firms compete in the telecommunications market, all firms should either provide the facilities necessary for universal service or contribute to the carrier(s) having the universal service obligations, on an equitable and nondiscriminatory basis. The incumbents' retail services should not be required to bear more (or less) of the funding burden than the new entrants' substitute services. In addition, it is desirable to use recovery mechanisms that are easy to understand and require minimal regulatory oversight once established.

Q. IS THERE A FIRST STEP OR AN ECONOMICALLY PREFERRED METHOD OF LAYING THE GROUNDWORK FOR REVISING UNIVERSAL SERVICE FUNDING?

1 A. Yes. The amount and structure of universal service funding depends on existing
2 rates. Ideally, universal service funding should begin with rate rebalancing so as
3 to minimize the need for subsidies without jeopardizing the universal service
4 objectives.

A.

#### 6 Q. WHAT DO YOU MEAN BY "RATE REBALANCING."

I mean to move rates toward the levels that would exist with effective competition. This requires consideration of forward looking economic costs and market conditions. Ideally, each service would be priced above its cost and would provide a contribution to the ILEC's shared and common costs. This would mean an increase in rates for residential basic local exchange service in order to allow other service prices to fall. Of course this ideal economic approach must be tempered by public policy considerations such as universal service.

#### Q. WHY IS RATE REBALANCING IMPORTANT?

A. First, increasing local rates and allowing the rates for other services to fall is more economically efficient. Market signals allow customers to make better economic decisions. Second, increasing local rates would reduce the need for a large universal fund.

And third, a competitive environment demands either rate rebalancing, explicit subsidy funding or both. Competition makes it impossible for a company to continue to rely on implicit subsidies. A protected monopoly could maintain implicit subsidies because the source of the subsidy payments was insulated from competitive entry and erosion. However, competition is the natural enemy of implicit subsidies. If the telecommunications business is to become competitive, implicit subsidies will need to be eliminated through the regulatory process because they will be driven out -- over time -- by the competitive process.

l	Q.	WHAT EFFECT DOES RATE REBALANCING HAVE ON THE NEED FOR A
2		UNIVERSAL SERVICE FUND?
3	A.	The more complete and far reaching the rate rebalancing, the smaller will be the
4		requirements of a universal service fund. If the price of basic local exchange
5		rises, the subsidy to universal service becomes smaller and the size of the required
6		funding mechanism to support universal service becomes smaller as well.
7		
8	Q.	HOW CAN THE TENNESSEE REGULATORY AUTHORITY CHANGE THE
9		IMPLICIT FUNDING MECHANISMS OF THE PAST TO PROVIDE
10		EXPLICIT FUNDING?
11	A.	Recall that the Act states "All providers of telecommunications services should
12		make an equitable and nondiscriminatory contribution to the preservation and
13		advancement of universal service." The calculation of the required support and
14		the support mechanism itself must be designed to be nondiscriminatory and
15		competitively neutral. The assessment should be broad based and applied against
16		the telecommunications services offered by all telecommunications providers in
17		the state.
18		
19	Q.	CAN YOU SUMMARIZE THE IMPORTANT ECONOMIC PRINCIPLES IN
20		CONSIDERING AFFORDABILITY, RATE REBALANCING, EVALUATION
21		OF SUBSIDIES AND UNIVERSAL SERVICE FUNDING?
22	A.	Yes. 1) Current rates in Tennessee are clearly affordable. 2) The implicit
23		subsidies of the past are no longer economically viable and are counter to the
24		Telecommunications act and the FCC Universal Service Order. 3) Rate
25		rebalancing is important for moving into the new competitive era. It is linked to
26		universal service funding and rate rebalancing can reduce the demands on
27		universal service funds. And 4) Universal service funding and rate rebalancing
28		should eliminate implicit subsidies. Universal service funding should be explicit,
29		broad-based and competitively neutral.

1	IV.	REVENUES TO BE INCLUDED IN THE REVENUE BENCHMARK (TRA
2		ISSUE #9j)
3		
4	Q.	WHAT IS THE DEFINITION OF THE SERVICES THAT SHOULD BE
5		SUPPORTED?
6	A.	Mr. Martin provides a list of the ten capabilities that are included in the definition
7		of supported services: single party service; voice grade access to the public
8		switched network; DTMF signaling or its functional equivalent; access to 911
9		emergency services; access to operator services; access to interexchange services;
10		access to directory assistance; toll control or toll blocking for qualified low
11		income customers; Lifeline; and Link-Up Tennessee.
12		
13	Q.	WHAT IS THE ECONOMIC STANDARD TO DETERMINE THE EXTENT
14		OF EXISTING IMPLICIT SUBSIDIZATION OF THESE CAPABILITIES?
15	A.	For ease of discussion, call these capabilities in aggregate universal service. The
16		size of the existing implicit subsidy to universal service is determined by
17		comparing the direct costs of basic service with the revenue that is directly
18		produced by basic service.
19		
20	Q.	WHAT REVENUES DOES THE FCC SUGGEST CONSIDERING TO
21		DETERMINE THE SIZE OF THE REQUIRED SUPPORT?
22	A.	In the FCC Universal Service Order, for example paragraph 259, it discusses a
23		nationwide benchmark based on the average revenue per line for local,
24		discretionary, access services and other telecommunications revenues.
25		
26	Q.	IS THE FCC APPROACH ECONOMICALLY CORRECT?
27	A.	No. The existence and size of the subsidy to universal service is determined by
28		comparing the revenue from basic service (universal service) with the cost of
29		providing basic service.

It is nonsensical to compare the cost of basic (universal) service to the revenues produced by a broad array of services which are *not* included in basic service. Such an apples-to-fruit-salad comparison has no value for establishing sound public policy and can only serve to confuse an examination of the issues that are truly relevant to this process.

A.

Q. CAN YOU PROVIDE AN EXAMPLE OF HOW THE INCLUSION OF
REVENUES FROM SERVICES OTHER THAN UNIVERSAL SERVICE WILL
FAIL TO IDENTIFY THE IMPLICIT SUBSIDY TO UNIVERSAL SERVICE?

Yes. Imagine a BellSouth customer for which the cost to provide basic local exchange/universal service to that customer is \$39/month. Further, assume that BellSouth receives \$17/month from a combination of the basic local exchange service price, the federal subscriber line charge and any high cost fund support that will continue into the future. Further, assume that the customer buys no other telecommunications services. In this example, it should be obvious that BellSouth provides an implicit subsidy to this customer in the amount of \$22 (\$39 - 17.00).<sup>10</sup>

However, if the average customer spends \$22 per line on access and vertical services, the FCC's approach would suggest that there is no subsidy what-so-ever to this customer. This approach fails to reveal the implicit subsidies embodied in existing rate structures.

Also, in my experience, spending on non-local telecommunications services across customers has a high variance, i.e., the average level of spending across customers masks much of the important information. Many customers spend only small amounts for non-local telecommunications services while a small number of

<sup>10</sup> The amount of any high cost fund support would represent a separate explicit subsidy to the customer. Note for ease of discussion, this example does not separately identify intrastate or interstate funding requirements.

customers will have high levels of telecommunications expenditures on non-local services. Mr. Martin discusses this phenomenon in his testimony. This skewed pattern of expenditures makes the ILEC highly vulnerable if the FCC's approach is adopted by the state commissions. The CLEC can target customers who have high telecommunications expenditures, leaving low-revenue customers to be served by the ILEC facing carrier of last resort obligations.

#### V. SUMMARY

Α.

#### Q. WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?

Yes. A subsidy occurs when a service produces revenues less than its costs. An implicit subsidy is one that is funded by the other services offered by the ILEC (which are priced at very high levels). The traditional implicit mechanisms of funding universal service are no longer viable in the new environment of expanding competition. In Tennessee residential basic local exchange service is priced below its cost. This shortfall is funded through high contribution margins from optional and competitive services that cannot be sustained going forward. Explicit methods of funding universal service must be developed that are competitively neutral, equitable and nondiscriminatory.

Economics indicates that subsidies should be used sparingly to achieve public policy objectives, and when they are used they should be explicit and competitively neutral. Rate rebalancing, with increases in local rates, can reduce the required size of the universal service fund.

One should not include a calculation of revenues from other services when evaluating the subsidy to residential basic local exchange service. It is nonsensical to compare the cost of residential basic service to revenues produced by a broad array of services which are *not* included in basic service. Such an apples-to-fruit-salad comparison has no value for establishing sound public policy and can only

1		serve to confuse an examination of the issues that are truly relevant to this
2		process.
3		
4	Q.	DOES THIS CONCLUDE YOUR TESTIMONY
5	A.	Yes it does.
6		

#### AFFIDAVIT

STATE OF California
COUNTY OF San Diego

BEFORE, ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Richard Emmerson, INDETEC International, who, being by me first duly sworn, deposed and said that:

RICHARD EMMERSON

SWORN TO AND SUBSCRIBED BEFORE ME this the 5th day of November, 1997.

NOTARY PUBLIC

My Commission expires: 7th 2,2001

#### CERTIFICATE OF SERVICE

I hereby certify that on November 12, 1997, a copy of the foregoing document was served on the parties of record, via U. S. Mail, postage pre-paid, addressed as follows:

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Paluck Turne

1		BELLSOUTH TELECOMMUNICATIONS, INC.
2		DIRECT TESTIMONY OF D. DAONNE CALDWELL
3		BEFORE THE TENNESSEE REGULATORY AUTHORITY
4		DOCKET NO. 97-00888
5		NOVEMBER 12, 1997
6		
7		
8	Q.	Please state your name, occupation and address.
9		
10	Α.	My name is D. Daonne Caldwell. I am an Acting Director in the Finance
11		Department of BellSouth Telecommunications, Inc. (hereinafter referred
12		to as "BellSouth" or "the Company"). My area of responsibility relates to
13		economic service costs. My business address is 675 W. Peachtree St.,
14		N.E., Atlanta, Georgia, 30375.
15		
16	Q.	Please state your professional experience and education related to
17		the issues in this proceeding?
18		
19	A.	I joined South Central Bell in 1976 in the Tupelo, Mississippi, Engineering
20		Department where I was responsible for Outside Plant Planning. In 1983,
21		I transferred to BellSouth Services, Inc. in Birmingham, Alabama, and was
22		responsible for the Centralized Results System Database. I moved to the
23		Pricing and Economics Department in 1984 where I developed
24		methodology for service cost studies until 1986 when I accepted a
25		rotational assignment with Bell Communications Research, Inc. (Bellcore).

1		while at Belicore, I was responsible for development and instruction of the
2		Service Cost Studies Curriculum including courses such as "Concepts of
3		Service Cost Studies", "Network Service Costs", "Nonrecurring Costs",
4		and "Cost Studies for New Technologies". In 1990, I returned to
5		BellSouth and was appointed to a position in the cost organization, which
6		is now a part of the Finance Department, with the responsibility of
7		managing the development of cost studies for transport facilities, both
8		loop and interoffice.
9		
0		I attended the University of Mississippi, graduating with a Master of
1		Science Degree in mathematics. I have attended numerous Bellcore
2		courses and outside seminars relating to service cost studies and
3		economic principles.
4		
5	Q.	Please state your relevant experience in testifying?
6		
7	A.	I have testified in each of the nine BellSouth states in the local
8		competition dockets, including arbitration dockets and/or generic cost
9		dockets. My extensive involvement in these dockets has provided me
20		with the opportunity to evaluate numerous cost models and
21		methodologies used by BellSouth and other parties to estimate the cost
22		of providing unbundled network elements and universal service.
23		

-2-

24 Q. What is the purpose of your testimony?

1	A.	The purpose of my testimony is to address some of the preliminary cost
2		modeling issues identified in the Tennessee Regulatory Authority's
3		(TRA's) letter to the Parties of Record dated October 31, 1997,
4		Attachment 1 Phase I Item 9. Specifically, I will address items 9a,e,f,g,h,
5		and i.
6		
7	Q.	Item 9a: Should universal service cost studies be company-specific
8		or generic?
9		
10	A.	Generic. The purpose of the cost studies is to determine the costs an
11		efficient provider would incur providing universal service in Tennessee,
12		specifically identifying high cost areas in the state. The FCC has
13		suggested that the correct method for determining these costs is the use
14		of a cost proxy model. A cost proxy model develops the costs of a
15		network designed to serve the existing customer locations and assuming
16		the existing wire center locations without regard to the company serving
17		the area.
18		
19	Q.	Should BellSouth company specific inputs be used in a cost proxy
20		model to determine the cost of universal service in Tennessee?
21		
22	A.	Yes. Data specific to BellSouth are appropriate inputs to a cost proxy
23		model because BellSouth is a large efficient provider of
24		telecommunication service in Tennessee. BellSouth specific inputs reflect
25		economies of scale that an efficient provider would be expected to

- achieve on a going forward basis including vendor discounts.
- 2 Additionally, BellSouth has experience providing service in the high cost
- areas that are identified by the cost proxy model.

4

Q. Item 9e: Which network components are necessary to provide
 services included in universal service?

7

The services and functionalities encompassed within the definition of 8 Α. universal service include single-party voice grade basic local exchange 9 telephone service which provides access to the public switched network 10 and dual tone multi-frequency signaling or its functional equivalent (i.e., 11 Touch-tone). These services and functionalities can be most closely 12 matched to the following unbundled network elements: an unbundled 2-13 wire analog loop (hereinafter referred to as "the loop"), an unbundled 2-14 wire analog port (the non-traffic sensitive (NTS) component of the local 15 switch), unbundled local switching, unbundled tandem switching and 16 unbundled common transport. The access to emergency, operator, 17 interexchange, and directory assistance services is provided through the 18

20

21

22

19

port and local usage.

Q. Item 9f: Should universal service cost studies be based on cost studies for permanent UNE prices?

23

A. No. In establishing the prices that BellSouth can charge for unbundled network elements, interconnection services, and collocation, the TRA

1	must consider the actual costs BellSouth is expected to incur in
2	furnishing these elements and services. Such prices should be based on
3	BellSouth's existing network configuration recalculated to reflect forward-
4	looking costs. In establishing the cost of universal service, an entirely
5	different cost model is necessary as Florida Public Service Commission
6	Chairman and Joint Board Member Julia Johnson explained <sup>1</sup> :
7	
8	"because the goals of determining costs for UNEs and universal service are
9	different, the cost models to be applied should also be different."
10	
11	"To be competitively neutral thus requires that a universal service mechanism be
12	provider-neutral. Therefore, it makes sense that a purely hypothetical network
13	should be used to approximate costs for a permanent high cost funding
14	mechanism."
15	
16	"For purposes of interconnection and UNEs, however, the goal in determining
17	costs is much different than the goal in determining costs for purposes of
18	designing and sizing a permanent high cost funding mechanism."
19	
20	And finally,
21	
22	
23	<sup>1</sup> April 22, 1997 letter from Julia L. Johnson, Chairman, to The Honorable Reed Hundt; Re:
24	Your request for more information regarding using the same cost studies for universal service
25	

and unbundled network elements

"Conceivably, the results from state-approved UNE cost studies might be useful 1 as sanity checks for the proxy models; however, I would urge extreme caution." 2 A copy of Chairman Johnson's letter is attached as Exhibit DDC-1. 3 4 BellSouth agrees with Chairman Johnson that it is not appropriate to use 5 the UNE TELRIC studies for the purpose of estimating universal service 6 high cost areas. The models and spreadsheets used in the UNE TELRIC 7 studies develop a statewide average cost while the universal service 8 fund costs require a more granular approach to identify high cost areas. 9 For example, the TELRIC Loop Cost Model used in the UNE studies 10 develops the cost of a statewide average loop in Tennessee. The costs 11 are developed from a statistically valid sample designed to give 12 statewide reliability. The sample was not designed nor was it intended to 13 provide reliability at any lower geographic level. Universal service 14 requires that costs be developed at least at the wire center level and 15 possibly at the census block group (CBG) level or below. 16 17 Furthermore, the cost of universal service must consider retail costs, 18 which include support costs such as product management, marketing 19 and customer services. Retail costs are not included in establishing the 20 wholesale costs of UNEs. Additionally, UNEs are unique stand alone 21 wholesale products while universal service is defined as a retail service 22

comprised of many network components. Therefore, the costs of UNEs

cannot simply be added together to develop the cost of universal service.

23

24

1	Q.	Item 9g: Should costs be developed on a combined or intrastate
2		basis?
3		
4	A.	The costs are developed without reference to jurisdictional separation.
5		For example, the cost of the loop is developed for the loop facility without
6		regard to the type traffic that will be carried over the facility. The issue of
7		combined or intrastate costs is really a cost recovery question not a cost
8		development issue. Mr. Martin addresses the issue of cost recovery in
9		his direct testimony.
10		
11	Q.	Item 9h: Should state specific or federal factors be used in the cost
12		studies?
13		
14	A.	State specific factors should be used in the universal service cost studies
15		for the state support funding and also for federal support funding to the
16		extent we are developing high cost areas to which federal support will be
17		supplied. Obviously, the purpose of this exercise is to determine the cost
18		of providing universal service in Tennessee; this requires consideration of
19		Tennessee specific data.
20		
21	Q.	Item 9i: Is it possible to create a hybrid model from the individually
22		proposed models?
22	٨	A huge amount of resources and time would be required to create a

hybrid model from the individually proposed models. Without knowing

24

more specifics about this issue, it would be difficult to estimate with more precision on the resources required to create a hybrid model.

#### Q. Please summarize your testimony.

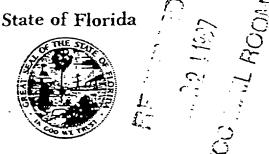
A. BellSouth agrees with the FCC suggestion that the use of a cost proxy
 model is the correct method for determining the cost of universal service.
 However, UNE cost figures or models are entirely inappropriate for use in
 computing the cost of universal service.

Universal service cost studies should reflect the costs an efficient provider will incur in providing universal service. The studies must take into account the fact that a retail service is involved, and that the service must be reliable and available on demand, with all associated planning and servicing requirements. The model chosen to compute universal service cost should use inputs that reflect state specific factors and include the cost of the service being provided without regard to jurisdictional separation. Jurisdictional separation is a cost recovery issue not a cost development issue. Additionally, BellSouth specific inputs are appropriate for use in the cost studies as they are representative of the costs of an efficient provider of telecommunications service in Tennessee.

Basing universal service support on a UNE costing methodology will almost assuredly result in an improperly sized universal service fund. An improperly sized fund will, of course, result in either a lack of incentive by

1		telecommunications providers to compete in high cost areas, or in
2		excessively high explicit support for the fund, making overall
3		telecommunications costs higher than necessary for Tennessee
4		businesses and consumers.
5		
6		
7	Q.	Does this conclude your testimony?
8		
9	A.	Yes.
10		
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24		
25		

Julia L. Johnson Chairman



Gerald L. Gunter Building 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850 (904)413-6044 FAX (904)413-6019

### Public Service Commission

April 22, 1997

The Honorable Reed Hundt Chairman Federal Communications Commission 1919 M Street NW Washington, DC 20554

Re: Your request for more information regarding using the same cost studies for universal service and unbundled network elements

#### Dear Chairman Hundt:

At a meeting in your office on March 27, and on a conference call with me and other NARUC members, you expressed concern that the proxy models were not sufficiently developed for immediate adoption and implementation. We all expressed some concern that the current models were not adequate, and agreed that there was a need to develop a process whereby the models could be further tested and developed. We also discussed the need and the desire for federal and state regulators to continue working together to develop costing models that produce accurate and sustainable results.

You have asked States to provide you with comments on how and whether state forward-looking cost studies for unbundled network elements (UNEs) could be used to help determine the cost of universal service or, at a minimum, whether such cost studies could serve as a "sanity check" on the proxy models' outputs. My staff informed you that because the goals of determining costs for UNEs and universal service are different, the cost models to be applied should also be different. You asked that we provide you with further information on why we employ two distinct cost standards for unbundled network elements and universal service.

The basic reason for using different principles is related to the assumption that cost studies for universal service contemplate network architectures, technologies, and input prices different from those associated with the current ILEC networks which are to be unbundled for UNE purposes. It is reasonable to fund high cost support based on a theoretical "efficient design" network principle that assumes the ability to instantaneously build an optimal, cost-efficient network that satisfies all existing demand at that point in time. This is because the Act contemplates there will be competition on a going-forward basis from multiple providers using different types of networks, and that universal service support mechanisms should be explicit and

Letter to Chairman Hundt April 22, 1997

competitively neutral. If the funding for universal service were based on, for example, the costs associated with the incumbent LECs' (ILECs) networks, alternative local providers whose costs were lower could receive excessive compensation. To be competitively neutral thus requires that a universal service mechanism be provider-neutral. Therefore, it makes sense that a purely hypothetical network should be used to approximate costs for a permanent high cost funding mechanism.

For purposes of interconnection and UNEs, however, the goal in determining costs is much different than the goal in determining costs for purposes of designing and sizing a permanent high cost funding mechanism. In the case of interconnection and UNEs, the goal is to determine the costs of pieces and parts of an actual existing network. UNEs such as unbundled loops will be provided by a LEC using an in-place network, not some hypothetically constructed network. However, while the appropriate cost analysis reflects the LEC's actual loop characteristics (such as length, quantity, geographic location, etc.), forward-looking technology is modeled and current input prices are used. If a purely hypothetical network were the basis of cost studies used for setting prices for interconnection and UNEs, the resulting costs likely would be lower than if cost studies were based on the existing network. Consequently, there would likely be little incentive for new entrants to build their own networks, since a "scorched" network design assumption would result in prices for using the incumbents' networks that were equal to or less than the costs of building a new network. Beyond the incentive to use the least cost option, firms strive to minimize their exposure to risk. Building facilities inherently carries investment risk and delays market entry. These factors make it all the more important to send the proper pricing signals to potential entrants. Finally, if a hypothetical network were the basis for UNE cost studies, it is more likely that the incumbent LECs would claim an illegal taking of property on the basis that they are not being adequately compensated for the true costs of their networks.

You have correctly stated on numerous occasions that 33 out of 35 states have adopted forward-looking cost methodologies for UNEs. While Florida is one of the 33 states that has adopted a forward-looking cost approach for UNEs, we have not adopted a "scorched earth" or "scorched node" approach. The critical difference between the FCC's "scorched node" forward-looking cost analysis and the type of forward-looking cost analyses endorsed by Florida (and by other states), is that our UNE cost studies are based on existing, real world networks and optimum future deployment based on these networks. These studies determine the LEC's long run incremental cost of providing an element, while acknowledging that the selection of least-cost technology is pragmatically constrained based on the economics of adding to an array of telecommunications equipment already in the network today. In contrast, the FCC adopted a "LEC in the box" approach for determining the costs for UNEs in its August 8, 1996 interconnection order. The FCC's analysis assumes nothing, or nothing except for the locations of switches, is in place and the entire network is constructed from scratch, based on the most

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cost-effective and efficient choice of technologies. Under this approach, a state of the art network sufficient to meet all current demand is instantaneously built. I believe that this costing methodology is inappropriate for pricing UNEs, because the methodology does not reflect any provider's current or prospective cost structure.

By employing cost studies that are based on existing real world networks and optimum future deployment of these networks, Florida's approach to UNE costing achieves a reasonable balance between the actual and hypothetical deployment of facilities. These analyses incorporate a firm's prospective technology practices at their current and prospective prices, and thus exclude obsolete and inefficient technologies and network design practices. Since the methodology yields incremental costs that are representative of a LEC's actual network characteristics, but based on efficient designs, network element prices set using these costs will be compensatory and sustainable: compensatory because they cover the firm's costs, and sustainable because they reflect current and prospective least-cost engineering practices.

We both agree that the existing universal service cost proxy models still require significant work before any reliance should be placed on their results. Development efforts should continue on these models, while also researching other possible options. Conceivably, the results from state-approved UNE cost studies might be useful as sanity checks for the proxy models; however, I would urge extreme caution. It is doubtful that the states have all conducted their cost studies for UNEs using the same methodology, so it is unknown to what extent the various cost studies can be reasonably compared to one another. Prior to comparing UNE cost study results to those from a proxy model, it is crucial to understand the key underlying assumptions and modeling techniques of each of the studies to be compared. Absent this information, an "apples and oranges" comparison could result. However, if due care is exercised, there may be merit in performing comparisons between proxy model results and those of UNE cost studies.

I look forward to working jointly with the FCC and states through the Universal Service Joint Board process on this effort.

Sincerely,

Julia L. Johnson

Chairman

Florida/Public Service Commission

#### AFFIDAVIT

#### STATE OF GEORGIA

#### COUNTY OF FULTON

BEFORE, ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Daonne Caldwell, BellSouth Telecommunications Inc., who, being by me first duly sworn, deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 97-00888 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be as set forth in the annexed Testimony consisting of \_\_\_\_\_ pages and \_\_\_\_\_ exhibit (s).

<u>Daonne Callwelf</u> DAONNE CALDWELL

SWORN TO AND SUBSCRIBED BEFORE ME this the 6th day of November, 1997.

NOTARY PUBLIC

My Commission expires:

Hetery Public, Fulton County, GA My Commission September 10, 2000

#### CERTIFICATE OF SERVICE

I hereby certify that on November 12, 1997, a copy of the foregoing document was served on the parties of record, via U. S. Mail, postage pre-paid, addressed as follows:

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